

# Handheld Nonlinear Detection of Delamination and Intrusion Faults in Composites, Phase I

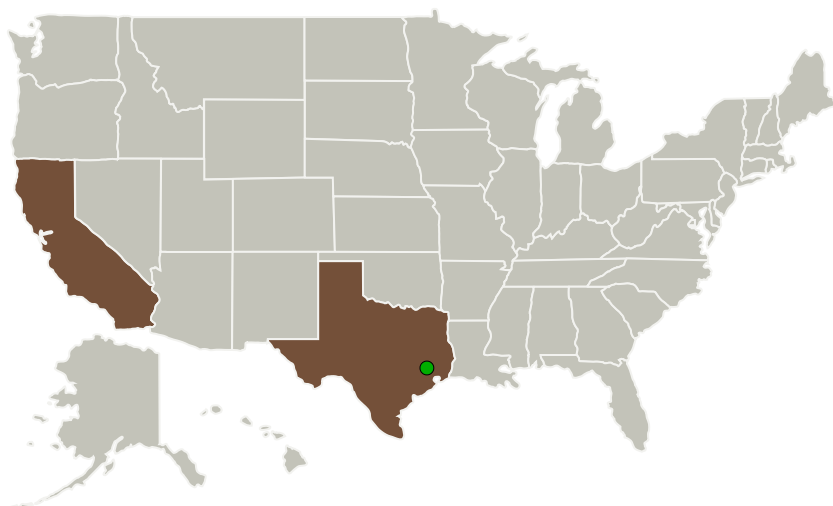
Completed Technology Project (2010 - 2010)



## Project Introduction

In Phase I of the SBIR program, LEEOAT Company will develop a hand-held high-resolution ultrasonic nonlinear imager for non-destructive inspection (NDI) of delamination and intrusion faults in composite structures. We will reduce-to-practice the innovation by conducting experiments on composite structures with calibrated faults. Additionally, we will design as well as theoretically simulate the imaging NDI system. Finally, we will estimate the cost/effort for the fabrication and testing of the portable cost-effective NDI prototype to be executed in Phase II of the program.

## Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
LEEAT Company	Lead Organization	Industry	Carlsbad, California
● Johnson Space Center(JSC)	Supporting Organization	NASA Center	Houston, Texas

### Primary U.S. Work Locations

California	Texas
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## Project Transitions



**January 2010:** Project Start



**July 2010:** Closed out

**Closeout Summary:** Handheld Nonlinear Detection of Delamination and Intrusion Faults in Composites, Phase I Project Image

**Closeout Documentation:**

- Final Summary Chart Image(<https://techport.nasa.gov/file/139039>)

## Organizational Responsibility

**Responsible Mission Directorate:**

Space Technology Mission Directorate (STMD)

**Lead Organization:**

LEEOAT Company

**Responsible Program:**

Small Business Innovation Research/Small Business Tech Transfer

## Project Management

**Program Director:**

Jason L Kessler

**Program Manager:**

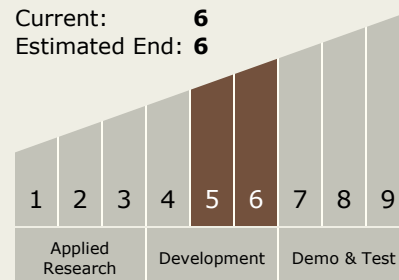
Carlos Torrez

**Principal Investigator:**

Eli Wiener-avnear

## Technology Maturity (TRL)

Start: 5  
Current: 6  
Estimated End: 6



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## Technology Areas

### Primary:

- TX08 Sensors and Instruments
  - └ TX08.3 In-Situ Instruments and Sensors
    - └ TX08.3.1 Field and Particle Detectors

## Target Destinations

The Moon, Mars, Outside the Solar System, The Sun, Earth, Others Inside the Solar System